

§ 80.205

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chapter applicants for type acceptance of 406.025 MHz radiobeacons must also comply with the certification procedures contained in § 80.1061 of this part.

(i) Certification is not required for U.S. Government furnished transmitters to fulfill a U.S. Government contract. However, such transmitters must comply with all technical requirements in this part.

(j) Certification is not required for transmitters authorized for developmental stations.

(k) Certification of individual radio transmitters requested by station applicants or licensees must also follow the certification procedure in paragraph (a) of this section. However, operation of such transmitters must be limited to the specific units individually identified on the station authorization.

(l) Ship station transmitters may be certificated for emissions not shown in § 80.205 of this part. However, such emissions are not authorized for use in the United States or for communications with U.S. coast stations.

(m) Ship station MF, HF, and VHF transmitters may employ external or internal devices to send synthesized voice transmissions for distress and safety purposes on any distress and safety frequency authorized for radiotelephony listed in § 80.369 provided the following requirements are met:

(1) The technical characteristics of the distress transmissions must comply with this part.

(2) A transmitter and any internal device capable of transmitting a synthesized voice message must be certificated as an integral unit.

(3) The synthesized voice distress transmission must begin with the words "this is a recording" and should be comprised of at least:

(i) the radiotelephone distress call as described in § 80.315(b) and the ship's position as described in § 80.316(c); or

(ii) the radiotelephone distress message as described in § 80.316(b). If available, the ship's position should be reported as described in § 80.316(c).

(4) Such transmission must be initiated manually by an off-switch that is protected from inadvertent activation and must cause the transmitter to

switch to an appropriate distress and safety frequency. The radiotelephone distress call and message described in §§ 80.203(m)(3) (i) and (ii), respectively, may be repeated. However, the entire transmission including repeats must not exceed 45 seconds from beginning to end. Upon ending the transceiver must return to the receive mode and must not be capable of sending the synthesized distress call for at least thirty seconds. Placing the switch to the off position must stop the distress transmission and permit the transmitter to be used to send and receive standard voice communications.

(5) Use of the microphone must cause the synthesized voice distress transmission to cease and allow the immediate use of the transmitter for sending and receiving standard voice communications.

(n) Applications for type acceptance of all marine radio transmitters operating in the 2–27.5 MHz band or the 156–162 MHz band received on or after June 17, 1999, must have a DSC capability in accordance with § 80.225. This requirement does not apply to transmitters used with AMTS or hand-held portable transmitters.

[51 FR 31213, Sept. 2, 1986, as amended at 53 FR 41434, Oct. 28, 1987; 53 FR 37308, Sept. 26, 1988; 54 FR 31839, Aug. 2, 1989; 56 FR 3787, Jan. 31, 1991; 56 FR 57496, Nov. 12, 1991; 56 FR 57988, Nov. 15, 1991; 57 FR 8727, Mar. 12, 1992; 62 FR 40305, July 28, 1997; 63 FR 36606, July 7, 1998]

§ 80.205 Bandwidths.

(a) An emission designator shows the necessary bandwidth for each class of emission of a station except that in ship earth stations it shows the occupied or necessary bandwidth, whichever is greater. The following table gives the class of emission and corresponding emission designator and authorized bandwidth:

Class of emission	Emission designator	Authorized bandwidth (kHz)
A1A	160HA1A	0.4
A1B ¹	160HA1B	0.4
A1D ¹²	16K0A1D	20.0
A2A	2K66A2A	2.8
A2B ¹	2K66A2B	2.8
A2D ¹²	16K0A2D	20.0
A3E	6K00A3E	8.0
A3N ²	2K66A3N	2.8
A3X ³	3K20A3X	25.0
F1B ⁴	280HF1B	0.3

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Class of emission	Emission designator	Authorized bandwidth (kHz)
F1B ⁵	300HF1B	0.5
F1B ⁶	16KOF1B	20.0
F1C	2K80F1C	3.0
F1D ¹²	16KOF1D	20.0
F2B ⁶	16KOF2B	20.0
F2C ⁷	16KOF2C	20.0
F2D ¹²	16KOF2D	20.0
F3C	2K80F3C	3.0
F3C ⁷	16KOF3C	20.0
F3E ⁸	16KOF3E	20.0
F3N ⁹	20MOF3N	20,000.0
G1D ¹²	16KOG1D	20.0
G2D ¹²	16KOG2D	20.0
G3D ¹⁰	16KOG3D	20.0
G3E ⁸	16KOG3E	20.0
G3N ^{3 13}	16KOG3N	20.0
H2A	1K40H2A	2.8
H2B ¹	1K40H2B	2.8
H3E ¹¹	2K80H3E	3.0
H3N	2K66H3N	2.8
J2A	160HJ2A	0.4
J2B ⁴	280HJ2B	0.3
J2B ⁵	300HJ2B	0.5
J2B	2K80J2B	3.0
J2C	2K80J2C	3.0
J3C	2K80J3C	3.0
J3E ¹¹	2K80J3E	3.0
J3N	160HJ3N	0.4
NON	NON	0.4
PON	(¹²)	(¹²)
R3E ¹¹	2K80R3E	3.0

¹ On 500 kHz and 2182 kHz A1B, A2B, H2B and J2B emissions indicate transmission of the auto alarm signals.

² Applicable only to transmissions in the 405–525 kHz band for direction finding.

³ Applicable only to EPIRB's.

⁴ Radioprinter transmissions for communications with private coast stations.

⁵ NB–DP radiotelegraph and data transmissions for communications with public coast stations.

⁶ Applicable only to radioprinter and data in the 156–162 MHz band and radioprinter in the 216–220 MHz band.

⁷ Applicable only to facsimile in the 156–162 MHz and 216–220 MHz bands.

⁸ Applicable only when maximum frequency deviation is 5 kHz. See also paragraph (b) of this section.

⁹ Applicable only to marine hand-held radar.

¹⁰ Applicable only to on-board frequencies for maneuvering or navigation.

¹¹ Transmitters approved prior to December 31, 1969, for emission H3E, J3E and R3E and an authorized bandwidth of 3.5 kHz may continue to be operated. These transmitters will not be authorized in new installations.

¹² Applicable to radiolocation and associated telecommand ship stations operating on 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz, and 459.000 MHz; emergency position indicating radiobeacons operating in the 406.000–406.1000 MHz frequency band; and data transmissions in the 156–162 MHz band.

¹³ Class C EPIRB stations may not be used after February 1, 1999.

(b) For land stations the maximum authorized frequency deviation for F3E or G3E emission is as follows:

(1) 5 kHz in the 72.0–73.0 MHz, 75.4–76.0 MHz and 156–162 MHz bands;

(2) 15 kHz for stations which were authorized for operation before December 1, 1961, in the 73.0–74.6 MHz band.

[51 FR 31213, Sept. 2, 1986, as amended at 52 FR 7418, Mar. 11, 1987; 53 FR 37308, Sept. 26, 1988; 56 FR 11516, Mar. 19, 1991; 57 FR 43407, Sept. 21, 1992; 58 FR 33344, June 17, 1993; 59 FR 7714, Feb. 16, 1994; 62 FR 40305, July 28, 1997; 63 FR 36606, July 7, 1998]

§ 80.207 Classes of emission.

(a) Authorization to use radio-telephone and radiotelegraph emissions by ship and coast stations includes the use of digital selective calling and selective calling techniques in accordance with § 80.225.

(b) In radiotelegraphy communications employing a modulated carrier the carrier must be keyed and modulated by an audio frequency.

(c) Authorization to use single side-band emission is limited to emitting a carrier;

(1) For full carrier transmitters at a power level between 3 and 6 dB below peak envelope power;

(2) For suppressed carrier transmitters at a power level at least 40 dB below peak envelope power; and

(3) For reduced or variable level carrier:

(i) In the 1600–4000 kHz band:

(A) For coast station transmitters 18±2 dB below peak envelope power;

(B) For ship station transmitters installed before January 2, 1982, 16±2 dB below peak envelope power; and

(C) For ship station transmitters installed after January 1, 1982, 18±2 dB below peak envelope power.

(ii) In the 4000–27500 kHz band:

(A) For coast station transmitters 18±2 dB below peak envelope power;

(B) For ship station transmitters installed before January 2, 1978, 16±2 dB below peak envelope power; and

(C) For ship station transmitters installed after January 1, 1978, 18±2 dB below peak envelope power.

(d) The authorized classes of emission are as follows:

Types of stations	Classes of emission
Ship Stations ¹	
Radiotelegraphy:	
100–160 kHz	A1A
405–525 kHz	A1A, J2A